

Release notes for ENDF/B Development photoat-029_Cu_000
evaluation

ENDF
B-VII.dev

October 13, 2016

- checkr Warnings:

1. A previous error halted parsing of the current section
MAT=2900, MF= 1, MT=451 (1): Parsing stopped

```
ERROR(S) FOUND IN MAT=2900, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      153 TO      175
```

- checkr Errors:

1. A variable is outside the allowed ENDF range
MAT=2900, MF= 1, MT=451 (0): Variable range

```
ERROR(S) FOUND IN MAT=2900, MF= 1, MT=451
MOD =      3 OUT OF RANGE      0 -      1      RECORD NUMBER      153
```

2. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=501 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=2900, MF=23, MT=501
SECTION 23/501 NOT IN DIRECTORY      RECORD NUMBER      177
```

3. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=502 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=2900, MF=23, MT=502
SECTION 23/502 NOT IN DIRECTORY      RECORD NUMBER      820
```

4. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=504 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=2900, MF=23, MT=504
SECTION 23/504 NOT IN DIRECTORY      RECORD NUMBER      1101
```

5. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=515 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=2900, MF=23, MT=515
SECTION 23/515 NOT IN DIRECTORY      RECORD NUMBER      1142
```

6. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=516 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=2900, MF=23, MT=516
SECTION 23/516 NOT IN DIRECTORY      RECORD NUMBER      1175
```

7. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=517 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=23, MT=517
SECTION 23/517 NOT IN DIRECTORY RECORD NUMBER 1226

8. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=522 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=23, MT=522
SECTION 23/522 NOT IN DIRECTORY RECORD NUMBER 1265

9. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=534 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=23, MT=534
SECTION 23/534 NOT IN DIRECTORY RECORD NUMBER 1559

10. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=535 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=23, MT=535
SECTION 23/535 NOT IN DIRECTORY RECORD NUMBER 1582

11. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=536 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=23, MT=536
SECTION 23/536 NOT IN DIRECTORY RECORD NUMBER 1611

12. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=537 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=23, MT=537
SECTION 23/537 NOT IN DIRECTORY RECORD NUMBER 1649

13. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=538 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=23, MT=538
SECTION 23/538 NOT IN DIRECTORY RECORD NUMBER 1688

14. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=539 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=23, MT=539
SECTION 23/539 NOT IN DIRECTORY RECORD NUMBER 1725

15. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=540 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=23, MT=540
SECTION 23/540 NOT IN DIRECTORY RECORD NUMBER 1774

16. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=541 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=23, MT=541
SECTION 23/541 NOT IN DIRECTORY RECORD NUMBER 1823

17. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=542 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=23, MT=542
SECTION 23/542 NOT IN DIRECTORY RECORD NUMBER 1871

18. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=23, MT=543 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=23, MT=543
SECTION 23/543 NOT IN DIRECTORY RECORD NUMBER 1919

19. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=27, MT=502 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=27, MT=502
SECTION 27/502 NOT IN DIRECTORY RECORD NUMBER 1993

20. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=27, MT=504 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=27, MT=504
SECTION 27/504 NOT IN DIRECTORY RECORD NUMBER 2047

21. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=27, MT=505 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=27, MT=505
SECTION 27/505 NOT IN DIRECTORY RECORD NUMBER 2103

22. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=2900, MF=27, MT=506 (0): Directory (b)

ERROR(S) FOUND IN MAT=2900, MF=27, MT=506
SECTION 27/506 NOT IN DIRECTORY RECORD NUMBER 2227

• fudge-4.0 Warnings:

- generic warning message
reaction label 0: Cu + gamma [coherent] / Product: gamma (Error # 0): Warning

WARNING: coherentScattering is not a valid distribution component for 2-body reaction

2. FIXME: Generic fudge unimplemented message
reaction label 0: Cu + gamma [coherent] / Product: gamma (Error # 2): Generic unimp (c)

WARNING: Checking not yet implemented for pointwise type data

3. generic warning message
reaction label 1: Cu + gamma [incoherent] / Product: gamma (Error # 0): Warning

WARNING: incoherentScattering is not a valid distribution component for 2-body reaction

4. FIXME: Generic fudge unimplemented message
reaction label 1: Cu + gamma [incoherent] / Product: gamma (Error # 2): Generic unimp (c)

WARNING: Checking not yet implemented for piecewise type data

5. Cross sections do not correctly sum up properly according to an ENDF (or equivalent) sumrule
summedReaction label 14: total (Error # 0): Sumrule

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 100.00%

6. Cross sections do not correctly sum up properly according to an ENDF (or equivalent) sumrule
summedReaction label 16: photoelectric absorption (Error # 0): Sumrule

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 89.01%

• fudge-4.0 Errors:

1. Calculated and tabulated thresholds don't agree
reaction label 0: Cu + gamma [coherent] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!

2. 2-body reaction not in center-of-mass frame
reaction label 0: Cu + gamma [coherent] / Product: gamma (Error # 1): 2-body not in COM

WARNING: 2-body reaction not in center-of-mass frame!

3. Calculated and tabulated thresholds don't agree
reaction label 1: Cu + gamma [incoherent] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!

4. 2-body reaction not in center-of-mass frame
reaction label 1: Cu + gamma [incoherent] / Product: gamma (Error # 1): 2-body not in COM

WARNING: 2-body reaction not in center-of-mass frame!

5. Energy range of data set does not match cross section range
reaction label 1: Cu + gamma [incoherent] / Product: gamma / Distribution incoherentScattering - piecewise: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (0.0 -> 1000000000.0) vs (1.0 -> 1e+11)
6. Calculated and tabulated thresholds don't agree
reaction label 2: e- + e+ + Cu [electron field] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 2.044e6 eV!
7. Calculated and tabulated thresholds don't agree
reaction label 3: e- + e+ + Cu [nuclear field] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1.022e6 eV!
8. Calculated and tabulated thresholds don't agree
reaction label 4: e- + Cu1s1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 8943.200000000001 eV!
9. Calculated and tabulated thresholds don't agree
reaction label 5: e- + Cu2s1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1086.1 eV!
10. Calculated and tabulated thresholds don't agree
reaction label 6: e- + Cu2p1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 958.53 eV!
11. Calculated and tabulated thresholds don't agree
reaction label 7: e- + Cu2p3/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 937.49 eV!
12. Calculated and tabulated thresholds don't agree
reaction label 8: e- + Cu3s1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 121.26 eV!
13. Calculated and tabulated thresholds don't agree
reaction label 9: e- + Cu3p1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 80.5 eV!
14. Calculated and tabulated thresholds don't agree
reaction label 10: e- + Cu3p3/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 77.86 eV!
15. Calculated and tabulated thresholds don't agree
reaction label 11: e- + Cu3d3/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10.09 eV!

16. Calculated and tabulated thresholds don't agree
reaction label 12: $e^- + \text{Cu}3d5/2$ / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 9.800000000000001 eV!

17. Calculated and tabulated thresholds don't agree
reaction label 13: $e^- + \text{Cu}4s1/2$ / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 7.11 eV!

18. Calculated and tabulated thresholds don't agree
summedReaction label 14: total / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1. eV!

19. Calculated and tabulated thresholds don't agree
summedReaction label 15: pair product / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1.022e6 eV!

20. Calculated and tabulated thresholds don't agree
summedReaction label 16: photoelectric absorption / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 7.11 eV!